

## ABSTRACT

A multiple laser diagnostic apparatus and method is provided that includes two or more lasers. Each laser simultaneously delivers a laser diagnostic beam. Each laser diagnostic beam has at least one distinct laser beam parameter. Different means to select two or more laser diagnostic beams and laser beam parameters are included. The laser diagnostic beams are combined in a combined diagnostic beam. The combined diagnostic beam is delivered at a substance at which the substance undergoes fluorescence emission. The fluorescence emission is detected and diagnostic data is analyzed or computed. The diagnostic data is displayed using displaying means. A computer program is provided to control and manage the simultaneous delivery of multiple laser diagnostic beams. Furthermore, a database is provided that contains of a plurality of laser diagnostic plans.